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09/490,147 01/24/00 FREEL

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EXAMINER

MYERS, H

ART UNIT

PAPER NUMBER

1764

DATE MAILED:

06/12/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/490,147

Applicant(s)
FREEL, ET AL

Examiner
Helene Myers

Group Art Unit
1764



- ☐ Responsive to communication(s) filed on _____.
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

- ☒ Claim(s) 1-80 is/are pending in the application.
- Of the above, claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-80 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claims _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
- ☐ received.
- ☐ received in Application No. (Series Code/Serial Number) _____.
- ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

- ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- ☒ Notice of References Cited, PTO-892
- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☐ Interview Summary, PTO-413
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-80 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jessup et al (5,288,393), and Kaneko et al (5401,280) or Fletcher et al (5,346,609) .

Jessup et al teaches that by controlling one or more properties of a gasoline fuel, the emissions of Na, Co or hydrocarbons can be reduced. It is noted that sulfur content adjustment is not taught by Jessup et al.

The Jessup references teach that by controlling one or more properties of a gasoline fuel suitable for combustion in automobiles, the emissions of Nox, CO and/or hydrocarbons can be reduced. The gasoline properties which can be controlled include Reid Vapor Pressure, the 50% and 90% D-86 distillation points, olefin content, paraffin content, octane number and aromatic content. The prior art references teach that by increasing or decreasing any combination of the

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above properties can result in the reduction of emissions. For example, Jessup '393 teaches that one of the most commercially successful gasoline fuel composition has a Reid Vapor Pressure of no greater than 7.5 psi, an olefin content of 0 to 15 volume %, and a 50% D-86 distillation point of greater than about 180°F and usually no greater than 215°F. See col. 14, lines 3 et. seq. of Jessup '393. The Jessup references additionally teach a reduction of hydrocarbon emissions when the aromatic content is increased to at least 35 volume % and preferably at least 40 volume %. See col. 14, lines 63-68 of Jessup '393.

In its broadest aspect, the invention set forth by Jessup is founded on the discovery that, when gasoline fuels are produced by blending a plurality of hydrocarbon streams together to produce a gasoline product suitable for combustion in an automotive spark-induced internal combustion engine, improvements in emissions of certain pollutants can be attained by controlling certain properties of the gasoline product. The sulfur content of the gasoline base fuels is not discussed in Jessup; however, the Examiner is of the position that any known, conventional, gasoline composition (from any refinery source) may be used as the "base fuel" in the invention of Jessup. That is, as the gasoline composition before the step(s) for controlling one or more of the properties has been performed. The Jessup Patent teaches that the gasolines suitable for use in Jessup must have sulfur contents higher than the claimed invention, that "typical amounts of sulfur commonly found in gasoline are much higher than that of the present invention, since a recognition of the importance of controlling sulfur has not previously existed" is by the prior art references to Kaneko and Fletcher which teach that low sulfur gasoline fuels are available and are

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known in the art. Sulfur contents of the gasoline composition of Kaneko are preferably below 20 ppm by weight. See col. 3, lines 16-21. Fletcher teaches a process for producing a desulfurized gasoline product wherein sulfur contents are typically below 20 ppm by weight. See Table 3 in col. 12. Thus, the Examiner is of the position that applicants' gasoline compositions fail to distinguish over the gasoline compositions of the fuels are known and are valued in the art.

Claims 1-80 are rejected under 35 U.S.C. 103(a) as being unpatentable over Townsend et al (H 1305) in view of Jessup et al (USPN 5,288,393).

The Townsend et al patent a process of exhaust emissions reduction by reducing concentration of aromatics, sulfur 90% distillate.

Jessup discloses controlling one or more properties to reduce emissions. It therefore would be obvious to one skilled in the art to reduce sulfur in order to reduce the emissions as taught by Townsend et al.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication should be directed to H. Myers at telephone number (703) 308-3323.

H. Myers
HELANE E. MYERS
PRIMARY EXAMINER

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H. Myers/vr

05-30-00



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